INDEX TO AUTHORS

BAER, HAROLD, DISCHE, ZACHARIAS, and KABAT, ELVIN A. Immunochemical studies on blood groups. VIII. The methylpentose contents of hog and human blood group A and O substances and their relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59

—. See KABAT, BAER, BEZER, and KNAUB, 43

BAKER, JAMES A., and LITTLE, RALPH B. Leptospirosis in cattle, 295

BANG, F. B. Studies on Newcastle disease virus. I. An evaluation of the method of titration, 233

—. II. Behavior of the virus in the embryo, 241

—. III. Characters of the virus itself with particular reference to electron microscopy, 251

BENNETT, IVAN L., JR. Observations on the fever caused by bacterial pyrogens. I. A study of the relationship between the fever caused by bacterial pyrogens and the fever accompanying acute infections, 267

—. II. A study of the relationship between the fevers caused by bacterial pyrogens and by the intravenous injection of the sterile exudates of acute inflammation, 279

BERNHEIMER, ALAN W., and RODBART, MARCELLE. The effect of nucleic acids and of carbohydrates on the formation of streptolysin, 149

BEZER, ADA E. See KABAT, BAER, BEZER, and KNAUB, 43

—. See KABAT, WOLF, and BEZER, 417

BJÖRKMAN, SVEN E., and HORSFALL, FRANK L., JR. The production of a persistent alteration in influenza virus by lanthanum or ultraviolet irradiation, 445

BLOCH, HUBERT. The effect of chick embryo extract on the growth and morphology of tubercle bacilli, 355

BROWN, WADE H. See PEARCE and BROWN, 579

BURRELL, JEAN I. See PILLEMER, WITTLER, BURRELL, and GROSSBERG, 205

CHAIKOFF, I. L., GILLMAN, T., ENTENMAN, C., RINEHART, J. F., and REICHERT, F. L. Cirrhosis and other hepatic lesions produced in dogs by thyroidectomy and by combined hypophysectomy and thyroidectomy, 1

—, LINDSAY, STUART, LORENZ, F. W., and ENTENMAN, C. Production of atheromatosis in the aorta of the bird by the administration of diethylstilbestrol, 373

CHEEVER, F. SARGENT, and MUELLER, J. HOWARD. Epidemic diarrheal disease of suckling mice. III. The effect of strain, litter, and season upon the incidence of the disease, 309

—. See PAPPENHEIMER and CHEEVER, 317

CLARKE, DELPHINE H., and FOX, JOHN P. The phenomenon of *in vitro* hemolysis produced by the rickettsiae of typhus fever, with a note on the mechanism of rickettsial toxicity in mice, 25

CROFT, CHARLES C. See MAYER, CROFT, and GRAY, 427

DALLDORF, GILBERT. See DEAN and DALLDORF, 645

DAVENPORT, FRED M., and HORSFALL, FRANK L., JR. The associative re-

actions of pneumonia virus of mice (PVM) and influenza viruses: the effects of pH and electrolytes upon virus-host cell combinations, 621

DEAN, DONALD J., and DALLDORF, GILBERT. The susceptibility of the hamster to mouse encephalomyelitis virus, 645

DI LAPI, MARIE M. See HEIDELBERGER, MACLEOD, and DI LAPI, 369

DISCHE, ZACHARIAS. See BAER, DISCHE, and KABAT, 59

DONG, LUTHER. See FABER, SILVERBERG, and DONG, 65

DUBOS, RENÉ J. The effect of sphingomyelin on the growth of tubercle bacilli, 73

—and MIDDLEBROOK, GARDNER. The effect of wetting agents on the growth of tubercle bacilli, 81

—. See MIDDLEBROOK and DUBOS, 521

EAGLE, HARRY, and MUSSELMAN, A. D. The rate of bactericidal action of penicillin *in vitro* as a function of its concentration, and its paradoxically reduced activity at high concentrations against certain organisms, 99

EISEMAN, B. A means of increasing the tuberculostatic effect of known chemotherapeutic agents, 189

ENDERS, JOHN F. See MORGAN, ENDERS, and WAGLEY, 503

ENTENMAN, C. See CHAIKOFF, GILLMAN, ENTENMAN, RINEHART, and REICHERT, 1

—. See CHAIKOFF, LINDSAY, LORENZ, and ENTENMAN, 373

FABER, HAROLD K., SILVERBERG, ROSALIE J., and DONG, LUTHER. Poliomyelitis in the *cynomolgus* monkey. IV. Further observations on exposures confined to the stomach and intestines, with notes on the fecal excretion of virus, 65

FORNEY, JOHN E. See RAFFEL and FORNEY, 485

FOX, JOHN P. See CLARKE and FOX, 25

FRIEDEWALD, WILLIAM F., and HOOK, EDWARD W., JR. Influenza virus infection in the hamster. A study of inapparent virus infection and virus adaptation, 343

GILLMAN, T. See CHAIKOFF, GILLMAN, ENTENMAN, RINEHART, and REICHERT, 1

GOLDBLATT, HARRY. See GOLLAN, RICHARDSON, and GOLDBLATT, 389

GOLLAN, FRANK, RICHARDSON, EVELYN, and GOLDBLATT, HARRY. Hypertensin in the systemic blood of animals with experimental renal hypertension, 389

GRAY, MARGARET M. See MAYER, CROFT, and GRAY, 427

GROSS, JEROME, and SCHMITT, FRANCIS O. The structure of human skin collagen as studied with the electron microscope, 555

GROSSBERG, D. B. See PILLEMER, WITTLER, BURRELL, and GROSSBERG, 205

HARDY, PAUL H., JR., and HORSFALL, FRANK L., JR. Reactions between influenza virus and a component of allantoic fluid, 463

HARRIS, SUSANNA. See HENLE, HARRIS, and HENLE, 133

HEIDELBERGER, MICHAEL, MACLEOD, COLIN M., and DI LAPI, MARIE M. The human antibody response to simultaneous injection of six specific polysaccharides of pneumococcus, 369

HENLE, GERTRUDE, HARRIS, SUSANNA, and HENLE, WERNER. The reactivity of various human sera with mumps complement fixation antigens, 133

—, HENLE, WERNER, WENDELL, KATHERINE K., and ROSENBERG,

PHILIP. Isolation of mumps virus from human beings with induced apparent or inapparent infections, 223

HENLE, WERNER. See HENLE, HARRIS, and HENLE, 133

—. See HENLE, HENLE, WENDELL, and ROSENBERG, 223

HOOK, EDWARD W., JR. See FRIEDEWALD and HOOK, 343

HORSFALL, FRANK L., JR. See BJÖRKMAN and HORSFALL, 445

—. See DAVENPORT and HORSFALL, 621

—. See HARDY and HORSFALL, 463

HUGGINS, CHARLES, and MOULTON, STANLEY H. Esterases of testis and other tissues, 169

KABAT, ELVIN A., BAER, HAROLD, BEZER, ADA E., and KNAUB, VESTA. Immunochemical studies on blood groups. VII. Chemical changes associated with destruction of blood group activity and enhancement of the Type XIV cross-reactivity by partial hydrolysis of hog and human blood group A, B, and O substances, 43

—, WOLF, ABNER, and BEZER, ADA E. Studies on acute disseminated encephalomyelitis produced experimentally in *rhesus* monkeys. III, 417

—. See BAER, DISCHE, and KABAT, 59

KLINE, B. E. See MILLER, MILLER, KLINE, and RUSCH, 89

KNAUB, VESTA. See KABAT, BAER, BEZER, and KNAUB, 43

KREBS, EDWIN G., and NAJJAR, VICTOR A. The inhibition of *d*-glyceraldehyde 3-phosphate dehydrogenase by specific antiserum, 569

LESTER, WILLIAM, JR. The influence of relative humidity on the infectivity of air-borne influenza A virus (PR8 strain), 361

LINDSAY, STUART. See CHAIKOFF, LINDSAY, LORENZ, and ENTENMAN, 373

LITTLE, RALPH B. See BAKER and LITTLE, 295

LORENZ, F. W. See CHAIKOFF, LINDSAY, LORENZ, and ENTENMAN, 373

MACLEOD, COLIN M. See HEIDELBERGER, MACLEOD, and DI LAPI, 369

MAYER, MANFRED M., CROFT, CHARLES C., and GRAY, MARGARET M. Kinetic studies on immune hemolysis. I. A method, 427

MCCARTY, MACLYN. The occurrence of nucleases in culture filtrates of group A hemolytic streptococci, 181

MIDDLEBROOK, GARDNER, and DUBOS, RENÉ J. Specific serum agglutination of erythrocytes sensitized with extracts of tubercle bacilli, 521

—. See DUBOS and MIDDLEBROOK, 81

MILLER, E. C., MILLER, J. A., KLINE, B. E., and RUSCH, H. P. Correlation of the level of hepatic riboflavin with the appearance of liver tumors in rats fed aminoazo dyes, 89

MILLER, J. A. See MILLER, MILLER, KLINE, and RUSCH, 89

MORGAN, HERBERT R. Studies on the relationship of pteroylglutamic acid to the growth of psittacosis virus (strain 6BC), 285

—, ENDERS, JOHN F., and WAGLEY, PHILIP F. A hemolysin associated with the mumps virus, 503

MOULTON, STANLEY H. See HUGGINS and MOULTON, 169

MUELLER, J. HOWARD. See CHEEVER and MUELLER, 309

MUSSELMAN, A. D. See EAGLE and MUSSELMAN, 99

NAJJAR, VICTOR A. See KREBS and NAJJAR, 569

PAPPENHEIMER, ALWIN M., and CHEEVER, F. SARGENT. Epidemic diarrheal disease of suckling mice. IV. Cytoplasmic inclusion bodies in intestinal epithelium in relation to the disease, 317

PEARCE, LOUISE. Hereditary osteopetrosis of the rabbit. II. X-ray, hematologic, and chemical observations, 597

— and BROWN, WADE H. Hereditary osteopetrosis of the rabbit. I. General features and course of disease; genetic aspects, 579

PILLEMER, LOUIS, WITTLER, RUTH G., BURRELL, JEAN I., and GROSSBERG, D. B. The immunochemistry of toxins and toxoids. VI. The crystallization and characterization of tetanal toxin, 205

PORTER, KEITH R., and THOMPSON, H. P. A particulate body associated with epithelial cells cultured from mammary carcinomas of mice of a milk-factor strain, 15

RAFFEL, SIDNEY, and FORNEY, JOHN E. The rôle of the "wax" of the tubercle bacillus in establishing delayed hypersensitivity. I. Hypersensitivity to a simple chemical substance, picryl chloride, 485

RATNOFF, OSCAR D. Studies on a proteolytic enzyme in human plasma. III. Some factors controlling the rate of fibrinolysis, 401

REICHERT, F. L. See CHAIKOFF, GILLMAN, ENTENMAN, RINEHART, and REICHERT, 1

RICHARDSON, EVELYN. See GOLLAN, RICHARDSON, and GOLDBLATT, 389

RINEHART, J. F. See CHAIKOFF, GILLMAN, ENTENMAN, RINEHART, and REICHERT, 1

RODBART, MARCELLE. See BERNHEIMER and RODBART, 149

ROSENBERG, PHILIP. See HENLE, HENLE, WENDELL, and ROSENBERG, 223

ROTHBARD, SIDNEY. Protective effect of hyaluronidase and type-specific anti-M serum on experimental group A streptococcus infections in mice, 325

ROUS, PEYTON. See SMITH and ROUS, 529

RUSCH, H. P. See MILLER, MILLER, KLINE, and RUSCH, 89

SCHMITT, FRANCIS O. See GROSS and SCHMITT, 555

SILVERBERG, ROSALIE J. See FABER, SILVERBERG, and DONG, 65

SMITH, WILLIAM E., and ROUS, PEYTON. The neoplastic potentialities of mouse embryo tissues. IV. Lung adenomas in baby mice as result of prenatal exposure to urethane, 529

THOMPSON, H. P. See PORTER and THOMPSON, 15

WAGLEY, PHILIP F. See MORGAN, ENDERS, and WAGLEY, 503

WANG, CHEN-I. The relation of infectious and hemagglutination titers to the adaptation of influenza virus to mice, 515

WENDELL, KATHERINE K. See HENLE, HENLE, WENDELL, and ROSENBERG, 223

WITTLER, RUTH G. See PILLEMER, WITTLER, BURRELL, and GROSSBERG, 205

WOLF, ABNER. See KABAT, WOLF, and BEZER, 417

INDEX TO SUBJECTS

ACID, pteroylglutamic, relationship to growth of psittacosis virus, strain 6BC, 285

Acids, nucleic, and carbohydrates, effect on formation of streptolysin, 149

Adenomas, lung, in baby mice as result of prenatal exposure to urethane, 529

Agglutination, serum, specific, of erythrocytes sensitized with tubercle bacilli extracts, 521

Air-borne influenza A virus, PR8 strain, infectivity, influence of relative humidity, 361

Allantoic fluid component and influenza virus, reactions between, 463

Aminoazo dyes, correlation of hepatic riboflavin level with appearance of liver tumors in rats fed, 89

Antibody response, human, to simultaneous injection of six specific pneumococcus polysaccharides, 369

Antigens, mumps complement fixation, reactivity of human sera with, 133

Antipneumococcus horse serum, Type XIV, methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with, 59

Antiserum, specific, inhibition of *d*-glyceraldehyde 3-phosphate dehydrogenase by, 559

Aorta, bird, production of atheromatosis in by diethylstilbestrol administration, 373

Atheromatosis, production in bird aorta by diethylstilbestrol administration, 373

BACILLI, tubercle, effect of sphingomyelin on growth, 73

—, tubercle, extracts, specific serum agglutination of erythrocytes sensitized with, 521

—, tubercle, growth, effect of wetting agents, 81

—, tubercle, growth and morphology, effect of chick embryo extract, 355

Bacillus, tubercle, wax, rôle in establishing delayed hypersensitivity to picryl chloride, 485

Bacterial pyrogens, fever caused by, and fever accompanying acute infections, relationship between, 267

— pyrogens, fevers caused by, and by intravenous injection of sterile exudates of acute inflammation, relationship between, 279

Bactericidal action of penicillin *in vitro*, rate as function of concentration, paradoxically reduced activity at high concentrations against certain organisms, 99

Bird aorta, production of atheromatosis in by diethylstilbestrol administration, 373

Blood group A, B, and O substances, hog and human, partial hydrolysis, chemical changes associated with destruction of blood group activity and enhancement of Type XIV cross-reactivity by, 43

— group A and O substances, hog and human, methylpentose contents, relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59

—, systemic, of animals with renal hypertension, hypertensin in, 389

Bodies, cytoplasmic inclusion, in intestinal epithelium in relation to epidemic diarrheal disease of suckling mice, 317

Body, particulate, associated with epithelial cells cultured from mam-

mary carcinomas of mice of milk-factor strain, 15

CANCER, mammary, of mice of milk-factor strain, particulate body associated with epithelial cells cultured from, 15
Carbohydrates and nucleic acids, effect on formation of streptolysin, 149
Carcinoma. *See* Cancer.
Cattle, leptospirosis in, 295
Cell, host, combinations with pneumonia virus of mice and influenza viruses, effects of hydrogen ion concentration and electrolytes, 621
Cells, epithelial, cultured from mammary carcinomas of mice of milk-factor strain, particulate body associated with, 15
Chemical substance, simple, picryl chloride, rôle of tubercle bacillus wax in establishing delayed hypersensitivity to, 485
—, x-ray, and hematologic observations on hereditary osteopetrosis of rabbit, 597
Chemistry, immuno-, of blood groups, chemical changes associated with destruction of blood group activity and enhancement of Type XIV cross-reactivity by partial hydrolysis of hog and human blood group A, B, and O substances, 43
—, immuno-, of blood groups, methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59
—, immuno-, of toxins and toxoids, crystallization and characterization of tetanal toxin, 205
Chemotherapeutic agents, known, tuberculostatic effect, means of increasing, 189
Cirrhosis and hepatic lesions produced in dogs by thyroidectomy and by combined hypophysectomy and thyroidectomy, 1
Collagen, skin, human, structure studied with electron microscope, 555
Complement fixation antigens, mumps, reactivity of human sera with, 133
Crystallization and characterization of tetanal toxin, 205
Cultivation of epithelial cells from mammary carcinomas of milk-factor strain, particulate body associated with, 15
Culture filtrates of group A hemolytic streptococci, occurrence of nucleases in, 181
Cytoplasmic inclusion bodies in intestinal epithelium in relation to epidemic diarrheal disease of suckling mice, 317

DIARRHEAL disease, epidemic, of suckling mice, cytoplasmic inclusion bodies in intestinal epithelium in relation to disease, 317
— disease, epidemic, of suckling mice, effect of strain, litter, and season upon incidence of disease, 309
Diethylstilbestrol administration, production of atheromatosis in bird aorta by, 373
Disease, Newcastle, virus, behavior in embryo, 241
—, Newcastle, virus, characters with particular reference to electron microscopy, 251
—, Newcastle, virus, evaluation of titration method, 233
Dyes, aminoazo, correlation of hepatic riboflavin level with appearance of liver tumors in rats fed, 89

ELECTROLYTES and hydrogen ion concentration, effects upon combinations of host cell with pneumonia virus of mice and influenza viruses, 621
Electron microscope, human skin collagen structure studied with, 555
— microscopy, characters of Newcastle disease virus with particular reference to, 251

Embryo, chick, behavior of Newcastle disease virus in, 241
— extract, chick, effect on growth and morphology of tubercle bacilli, 355
— tissues, mouse, neoplastic potentialities, lung adenomas in baby mice as result of prenatal exposure to urethane, 529
Encephalomyelitis, acute disseminated, produced in *rhesus* monkeys, 417
— virus, mouse, susceptibility of hamster to, 645
Enzyme, proteolytic, in human plasma, factors controlling rate of fibrinolysis, 401
Epidemic diarrheal disease of suckling mice, cytoplasmic inclusion bodies in intestinal epithelium in relation to disease, 317
— diarrheal disease of suckling mice, effect of strain, litter, and season upon incidence of disease, 309
Epithelial cells cultured from mammary carcinomas of mice of milk-factor strain, particulate body associated with, 15
Epithelium, intestinal, cytoplasmic inclusion bodies in, in relation to epidemic diarrheal disease of suckling mice, 317
Erythrocytes sensitized with tubercle bacilli extracts, specific serum agglutination, 521
Esterases of testis and other tissues, 169
Excretion, fecal, of poliomyelitis virus in *cynomolgus* monkey, 65
Exposure, prenatal, to urethane, lung adenomas in baby mice as result of, 529
Extract, chick embryo, effect on growth and morphology of tubercle bacilli, 355
Extracts, tubercle bacilli, specific serum agglutination of erythrocytes sensitized with, 521
Exudates, sterile, of acute inflammation, intravenous injection, fevers caused by, and by bacterial pyrogens, relationship between, 279

FECAL excretion of poliomyelitis virus in *cynomolgus* monkey, 65
Fever caused by bacterial pyrogens and fever accompanying acute infections, relationship between, 267
—, typhus. *See* Typhus.
Fevers caused by bacterial pyrogens and by intravenous injection of sterile exudates of acute inflammation, relationship between, 279
Fibrinolysis, rate, factors controlling, 401
Filtrates, culture, of group A hemolytic streptococci, occurrence of nucleases in, 181
Fluid component, allantoic, and influenza virus, reactions between, 463

GENETIC aspects of hereditary osteopetrosis of rabbit, 579
d - Glyceraldehyde 3-phosphate dehydrogenase, inhibition by specific antiserum, 569
Growth and morphology of tubercle bacilli, effect of chick embryo extract, 355
—, psittacosis virus, strain 6BC, relationship of pteroylglutamic acid, 285
—, tubercle bacilli, effect of sphingomyelin, 73
—, tubercle bacilli, effect of wetting agents, 81

HEMAGGLUTINATION and infectious titers, relation to adaptation of influenza virus to mice, 515
Hematologic, x-ray, and chemical observations on hereditary osteopetrosis of rabbit, 597
Hemolysin associated with mumps virus, 503
Hemolysis, immune, kinetic studies, method, 427
—, *in vitro*, produced by typhus fever rickettsiae, and mechanism of rickettsial toxicity, 25

Hemolytic streptococci, group A, culture filtrates, occurrence of nucleases in, 181
Hepatic lesions and cirrhosis produced in dogs by thyroidectomy and by combined hypophysectomy and thyroidectomy, 1
— riboflavin level, correlation with appearance of liver tumors in rats fed aminoazo dyes, 89
Hereditary osteopetrosis of rabbit, general features and course of disease, genetic aspects, 579
— osteopetrosis of rabbit, x-ray, hematologic, and chemical observations, 597
Horse serum, Type XIV antipneumococcus, methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with, 59
Humidity, relative, influence on infectivity of air-borne influenza A virus, PR8 strain, 361
Hyaluronidase and type-specific anti-M serum, protective effect on group A streptococcus infections in mice, 325
Hydrogen ion concentration and electrolytes, effects upon combinations of host cell with pneumonia virus of mice and influenza viruses, 621
Hydrolysis, partial, of hog and human blood group A, B, and O substances, chemical changes associated with destruction of blood group activity and enhancement of Type XIV cross-reactivity by, 43
Hypersensitivity to picryl chloride, delayed, rôle of tubercle bacillus wax in establishing, 485
Hypertensin in systemic blood of animals with renal hypertension, 389
Hypertension, renal, hypertensin in systemic blood of animals with, 389
Hypophysectomy combined with thyroidectomy producing cirrhosis and hepatic lesions in dogs, 1

IMMUNE hemolysis, kinetic studies, method, 427
Immunochemistry, blood groups, chemical changes associated with destruction of blood group activity and enhancement of Type XIV cross-reactivity by partial hydrolysis of hog and human blood group A, B, and O substances, 43
—, blood groups, methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59
— of toxins and toxoids, crystallization and characterization of tetanal toxin, 205
Inflammation, acute, sterile exudates, intravenous injection, fevers caused by, and by bacterial pyrogens, relationship between, 279
Influenza A virus, PR8 strain, air-borne, infectivity, influence of relative humidity, 361
— virus, adaptation to mice, relation of infectious and hemagglutination titers to, 515
— virus and allantoic fluid component, reactions between, 463
— virus infection in hamster, inapparent virus infection and virus adaptation, 343
— virus, production of persistent alteration by lanthanum or ultraviolet irradiation, 445
— viruses and pneumonia virus of mice, effects of hydrogen ion concentration and electrolytes upon virus-host cell combinations, 621
Injection, intravenous, of sterile exudates of acute inflammation, fevers caused by, and by bacterial pyrogens, relationship between, 279
—, simultaneous, of six specific pneumococcus polysaccharides, human antibody response, 369
Intestinal epithelium, cytoplasmic inclusion bodies in, in relation to

epidemic diarrheal disease of suckling mice, 317
Intestines and stomach, poliomyelitis in *cynomolgus* monkey, fecal excretion of virus, 65
Irradiation, ultraviolet, or lanthanum, production of persistent alteration in influenza virus by, 445

KIDNEY hypertension, hypertensin in systemic blood of animals with, 389
Kinetic studies of immune hemolysis, method, 427

LANTHANUM or ultraviolet irradiation, production of persistent alteration in influenza virus by, 445
Leptospirosis in cattle, 295
Lesions, hepatic, and cirrhosis produced in dogs by thyroidectomy and by combined hypophysectomy and thyroidectomy, 1
Liver tumors in rats fed aminoazo dyes, correlation of hepatic riboflavin level with appearance, 89
Lung adenomas in baby mice as result of prenatal exposure to urethane, 529

MAMMARY carcinomas of mice of milk-factor strain, particulate body associated with epithelial cells cultured from, 15
Man, antibody response to simultaneous injection of six specific pneumococcus polysaccharides, 369
— and hog blood group A, B, and O substances, partial hydrolysis, chemical changes associated with destruction of blood group activity and enhancement of Type XIV cross-reactivity by, 43
— and hog blood group A and O substances, methylpentose contents, relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59
Man, isolation of mumps virus from human beings with induced apparent or inapparent infections, 223
—, plasma, proteolytic enzyme in, factors controlling rate of fibrinolysis, 401
—, reactivity of various sera with mumps complement fixation antigens, 133
—, skin collagen, structure studied with electron microscope, 555
Methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with Type XIV antipneumococcus horse serum, 59
Microscope, electron, human skin collagen structure studied with, 555
Microscopy, electron, characters of Newcastle disease virus with particular reference to, 251
Milk-factor strain of mice, particulate body associated with epithelial cells cultured from mammary carcinomas, 15
Morphology and growth of tubercle bacilli, effect of chick embryo extract, 355
Mumps complement fixation antigens, reactivity of human sera with, 133
— virus, hemolysin associated with, 503
— virus, isolation from human beings with induced apparent or inapparent infections, 223

NEOPLASTIC potentialities of mouse embryo tissues, lung adenomas in baby mice as result of prenatal exposure to urethane, 529
Newcastle disease. *See* Disease.
Nucleases, occurrence in culture filtrates of group A hemolytic streptococci, 181
Nucleic acids and carbohydrates, effect on formation of streptolysin, 149

OSTEOPETROSIS, hereditary, of rabbit, general features and course of disease, genetic aspects, 579
—, hereditary, of rabbit, x-ray, hematologic, and chemical observations, 597

PARTICULATE body associated with epithelial cells cultured from mammary carcinomas of mice of milk-factor strain, 15
Penicillin, rate of bactericidal action *in vitro*, as function of concentration, paradoxically reduced activity at high concentrations against certain organisms, 99
Picryl chloride, rôle of tubercle bacillus wax in establishing delayed hypersensitivity to, 485
Plasma, human, proteolytic enzyme in, factors controlling rate of fibrinolysis, 401
Pneumococcus polysaccharides, specific, six, human antibody response to simultaneous injection, 369
Pneumonia virus of mice and influenza viruses, effects of hydrogen ion concentration and electrolytes upon virus-host cell combinations, 621
Poliomyelitis in *cynomolgus* monkey, exposures confined to stomach and intestines, fecal excretion of virus, 65
Polysaccharides, specific pneumococcus, six, human antibody response to simultaneous injection, 369
Prenatal exposure to urethane, lung adenomas in baby mice as result of, 529
Proteolytic enzyme in human plasma, factors controlling rate of fibrinolysis, 401
Psittacosis virus, strain 6BC, growth, relationship of pteroylglutamic acid, 285
Pteroylglutamic acid, relationship to growth of psittacosis virus, strain 6BC, 285
Pyrogens, bacterial, fever caused by, and fever accompanying acute infections, relationship between, 267
—, bacterial, fevers caused by, and by intravenous injection of sterile exudates of acute inflammation, relationship between, 279

RENAL. *See* Kidney.
Riboflavin level, hepatic, correlation with appearance of liver tumors in rats fed aminoazo dyes, 89
Rickettsiae, typhus fever, *in vitro* hemolysis produced by, and mechanism of rickettsial toxicity, 25
Roentgen ray, hematologic, and chemical observations on hereditary osteopetrosis of rabbit, 597

SENSITIZATION of erythrocytes with tubercle bacilli extracts, specific serum agglutination, 521
Sera, human, reactivity with mumps complement fixation antigens, 133
Serum agglutination, specific, of erythrocytes sensitized with tubercle bacilli extracts, 521
—, anti-M, type-specific, and hyaluronidase, protective effect on group A streptococcus infections in mice, 325
—, horse, Type XIV antipneumococcus, methylpentose contents of hog and human blood group A and O substances, relationship to cross-reactivity with, 59
Skin collagen, human, structure studied with electron microscope, 555
Specific antiserum, inhibition of *d*-glyceraldehyde 3 - phosphate dehydrogenase by, 569

Specific pneumococcus polysaccharides, six, human antibody response to simultaneous injection, 369
— serum agglutination of erythrocytes sensitized with tubercle bacilli extracts, 521
—, type-, anti-M serum, and hyaluronidase, protective effect on group A streptococcus infections in mice, 325
Sphingomyelin, effect on tubercle bacilli growth, 73
Stomach and intestines, poliomyelitis in *cynomolgus* monkey, fecal excretion of virus, 65
Streptococci, group A hemolytic, culture filtrates, occurrence of nucleases in, 181
Streptococcus, group A, infections in mice, protective effect of hyaluronidase and type-specific anti-M serum, 325
Streptolysin formation, effect of nucleic acids and carbohydrates, 149
Susceptibility of hamster to mouse encephalomyelitis virus, 645

TESTIS and other tissues, esterases of, 169
Tetanal toxin, crystallization and characterization, 205
Thyroidectomy, and combined hypophysectomy and thyroidectomy, producing cirrhosis and hepatic lesions in dogs, 1
— and hypophysectomy, combined, and thyroidectomy, producing cirrhosis and hepatic lesions in dogs, 1
Tissues, esterases, 169
—, mouse embryo, neoplastic potentialities, lung adenomas in baby mice as result of prenatal exposure to urethane, 529
Titers, infectious and hemagglutination, relation to adaptation of influenza virus to mice, 515
Toxicity, rickettsial, in mice, mechanism of, and *in vitro* hemolysis produced by typhus fever rickettsiae, 25
Toxins and toxoids, immunochemistry, crystallization and characterization of tetanal toxin, 205
Toxoids and toxins, immunochemistry, crystallization and characterization of tetanal toxin, 205
Tubercle bacilli extracts, specific serum agglutination of erythrocytes sensitized with, 521
— bacilli, growth, effect of sphingomyelin, 73
— bacilli, growth, effect of wetting agents, 81
— bacilli, growth and morphology, effect of chick embryo extract, 355
— bacillus wax, rôle in establishing delayed hypersensitivity to picryl chloride, 485
Tuberculostatic effect of known chemotherapeutic agents, means of increasing, 189
Tumors, liver, in rats fed aminoazo dyes, correlation of hepatic riboflavin level with appearance, 89
Typhus fever rickettsiae, *in vitro* hemolysis produced by, and mechanism of rickettsial toxicity, 25

ULTRAVIOLET irradiation or lanthanum, production of persistent alteration in influenza virus by, 445
Urethane, prenatal exposure to, lung adenomas in baby mice as result of, 529

VIRUS, encephalomyelitis, mouse, susceptibility of hamster to, 645
—, influenza A, PR8 strain, airborne, infectivity, influence of relative humidity, 361

Virus, influenza, adaptation to mice, relation of infectious and hemagglutination titers to, 515
—, influenza, and allantoic fluid component, reactions between, 463
—, influenza, infection, in hamster, inapparent virus infection and virus adaptation, 343
—, influenza, production of persistent alteration by lanthanum or ultraviolet irradiation, 445
—, mumps, hemolysin associated with, 503
—, mumps, isolation from human beings with induced apparent or inapparent infections, 223
—, Newcastle disease, behavior in embryo, 241
—, Newcastle disease, characters with particular reference to electron microscopy, 251
—, Newcastle disease, evaluation of titration method, 233
Virus, pneumonia, of mice, and influenza viruses, effects of hydrogen ion concentration and electrolytes upon virus-host cell combinations, 621
—, poliomyelitis, fecal excretion in *cynomolgus* monkey, 65
—, psittacosis, strain 6BC, growth, relationship of pteroylglutamic acid, 285
Viruses, influenza, and pneumonia virus of mice, effects of hydrogen ion concentration and electrolytes upon virus-host cell combinations, 621

WAX of tubercle bacillus, rôle in establishing delayed hypersensitivity to picryl chloride, 485
Wetting agents, effect on growth of tubercle bacilli, 81

X-RAY. *See* Roentgen ray.